

## **Remarks**

Claims 43-52 and 54 remain in consideration for this application, with claims 43 and 49 being in independent format. Claims 43 and 49 are currently amended; claims 1-33 have been withdrawn; and claims 34-42 have been cancelled.

The application and specification were objected to for failing to comply with CFR 1.821(d), for it was alleged that the sequence identifiers used were not exactly “SEQ ID NO:”. Applicants submit herewith a substitute specification correcting the sequence identifiers.

The Office Action also alleged that the sequences disclosed in Table 2 are different than the sequences in the sequence listing. As an example, it was alleged that “SEQ ID 1 of table 2 identifies a 30 nucleotide sequence, while SEQ ID NO 1 of the sequence listing is 1820 nucleotides in length.” Applicants have reviewed their previous specification submission and note that the “clean” version did not include any instance of “SEQ ID 1” therein. However, in reviewing the “marked-up” version, Applicants note that Table 2 did not include the previous SEQ ID NOS (i.e. 1, 2, 3, etc) as being struck through. Accordingly, Applicants have corrected that oversight in the current “marked-up” version and therefore assert that this objection, as well as the one identified above, have been overcome.

The rejection of claims 43 and 45-47 under 35 USC 103(a) for allegedly being unpatentable over Knight (A) in view of Boyle, was maintained. It was alleged that Knight (A) taught a method of fluorescence in situ hybridization (FISH) on interphase chromosomes and taught that the probes were labeled and detected. It was further alleged that Knight taught that the distance from the terminal nucleic acid was as little as

268-296 kb for 6ptel48. Knight was alleged to have taught a method for detecting cytogenetic abnormalities using a plurality of probes within 600 kb of the terminal nucleotide of the chromosome.

To begin, Applicants have amended the claims of the present invention to require human DNA probes. In contrast, the probes in Knight (A) are not human DNA. Instead, Knight (A) only uses BAC, PAC, or P1 clones as the probes. This limitation of the probes comprising human DNA is captured in claim 43. Further, Boyle does not make up for the deficiencies of Knight. One of skill in the art would not find the method of present invention obvious in view of the non-human probes disclosed in Knight (A) in view of Boyle. Accordingly, Applicants assert that this rejection has been overcome.

The rejection of claims 44, 48, 49-52 and 54 under 35 USC 103(a) as allegedly being unpatentable over Knight (A) and Boyle in view of Knight (B), was maintained. It was alleged that Knight (B) taught chromosomal rearrangements involving the telomeres of the chromosomes were emerging as an important cause of human genetic diseases and it was possible to screen for telomeric rearrangements using FISH.

Knight (A) in view of Boyle is discussed above. Knight (B) also uses BAC, PAC, and P1 clones as probes which are artificial DNA from E. coli. Claims 44 and 48 depend from claim 43, discussed above, and therefore include the limitation of probes from human chromosomes. Independent claim 49 includes the limitation of human DNA probes, however, in an effort to make this clearer, Applicants have amended claim 49 to include that the method includes the step of “assaying a subtelomeric region of a human chromosome arm.... said probe being comprised of human DNA” It cannot be said that the use of non-human BAC, PAC, and P1 clones as probes would teach or

suggest, with a reasonable expectation of success, to use probes comprising human DNA. Accordingly, Applicants assert that this rejection has been overcome.

In view of the foregoing, it is respectfully submitted that all rejections have been overcome and that the claims as they now stand are patentable over the art of record and a Notice of Allowance appears to be in order and is courteously solicited.

The fees for a Request for Continued Examination and two-month extension of time are included herewith. Any additional fee due in connection with this amendment should be charged against Deposit Account No. 50-1662.

Respectfully Submitted,

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